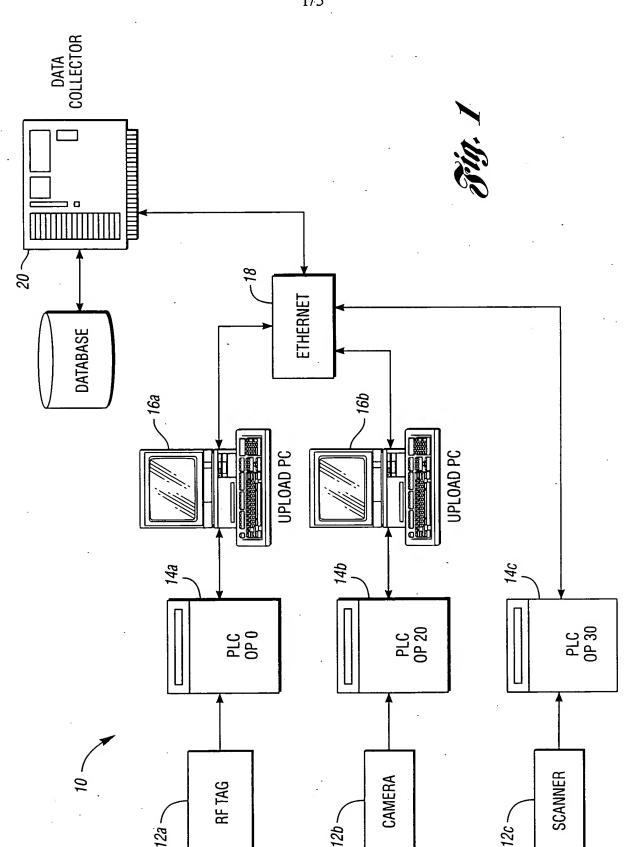
Title: METHOD AND SYSTEM FOR AUTOMATICALLY ISOLATING SUSPECT ITEMS IN A MANUFACTURING OR ASSEMBLY ENVIRONMENT

First Named Inventor: MICHAEL A. GALLU, et al. erial No.: / Atty. Docket No.: 81078764 / FMC 1646 PUS

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Upload PC waits for indication that data is ready to be read

Item & carrier move into station, PLC reads RF Tag on Carrier, sets data ready bit to indicate that the upload PC can now read the data.

Upload PC acknowledges Data Ready Bit and reads PLC memory area for part information including item ID number, model type, components, etc.

Upload PC formats the data and sends the Data Upload message to the Data Collection System.

The Upload PC then sends a suspect check message and waits for the response. The Upload PC waits for a specified amount of time for a response. If the internal timer expires, the default assumption is the part is suspect.

Data Collection System compares item ID number(s) against the suspect list and replies with a "yes" or "no" type response. (Message is sent, and the Response 0=Pass, 10=Hold or 11=SCRAP. If there is a hold or scrap, the Response description will contain text including all suspect numbers. For PLC communications, status of 1 for suspect, 0 for ok is sent followed by the suspect ID and the item ID number. If there is a hold or scrap, the system will store Operation ID that requested the suspect search and the date/time the unit was isolated.)

If the suspect check is OK, Upload PC writes an accept bit to the PLC. If not OK, it writes a reject bit and one or more suspect numbers to the PLC up to the max allowed which is 1.

Upload PC then activates (writes) a done bit to the PLC.

PLC then controls automation to route the item to the offload area or spur if suspect or to the next station if OK.

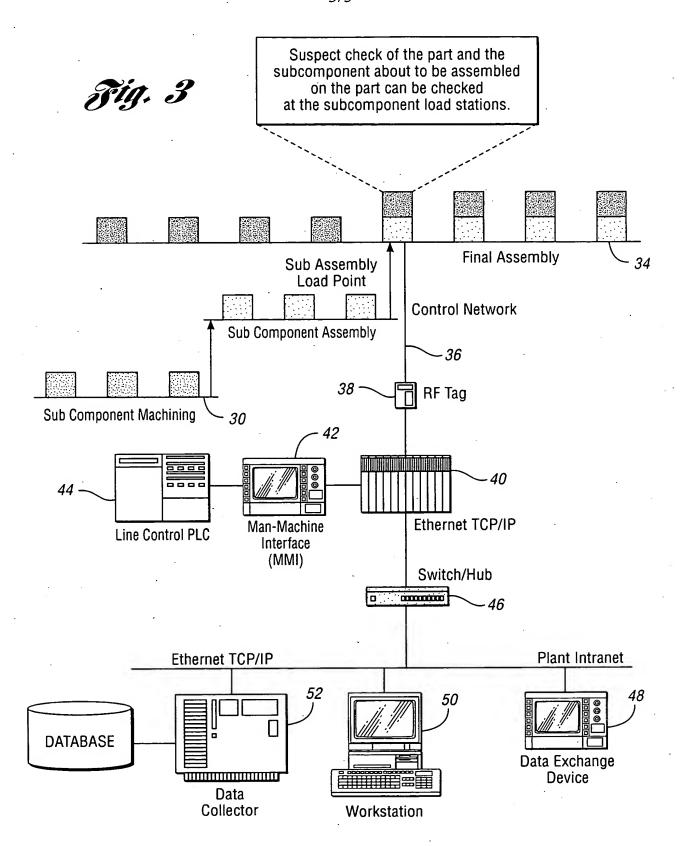
Fig. 2

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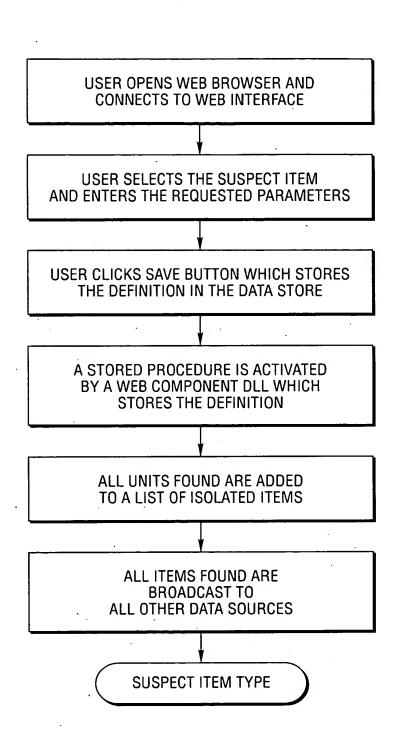


Fig. 4

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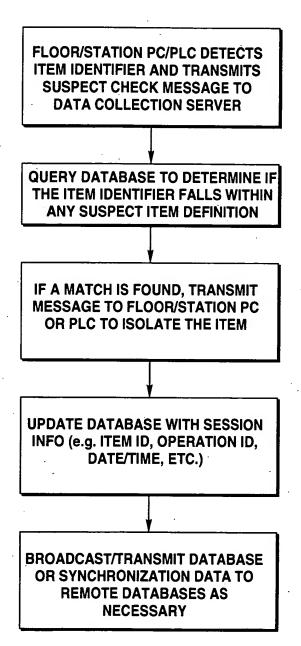


Fig. 5